



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/667,651 | 09/23/2003 | Toshimitsu Tetsui | 243028US0DIV | 9115 |

22850 7590 09/23/2008
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

| |
|----------|
| EXAMINER |
|----------|

MORILLO, JANELLE COMBS

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1793

| | |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

09/23/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/667,651 | Applicant(s) TETSUI ET AL. | |
| | Examiner Janelle Morillo | Art Unit 1793 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,10-12,14,16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8,10-12,14,16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/789540.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>071408</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on July 14, 2008 and April 17, 2008 have been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8, 10-12, 14, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masahashi et al. (US 5,370,839).

Masahashi teaches a process of working and heat treating a TiAl alloy with 47.5-52at% Ti and 1-5at% Cr, balance (42.5-51%) Al (column 2 lines 65-68- column 3 lines 1-5), which overlaps the instant alloy composition to achieve a lamellar structure (column 6 line 67). Said alloy is processed by homogenization heating to (1273K – solidus temperature) for 2-100 hrs (column 5 lines 44-46), which broadly overlaps the α temperature range as well as the $\alpha + \beta$. Masahashi teaches said homogenization step is followed by a thermomechanical heat treatment using a cooling rate of $\geq 10\text{K/min}$ (column 6 line 43) and a temperature of 1173K- solidus

Art Unit: 1793

temperature (column 6 line 11), which overlaps the predetermined working temperature and cooling rate. Masahashi teaches the thermomechanical working can be forging (column 7 line 4). Masahashi teaches the thermomechanical treatment is performed in a nonoxidizing atmosphere (column 6 lines 38-40) in order to prevent oxidation. Though Masahashi does not specify the workpiece is removed from the high temperature homogenizing furnace prior to hot working, however, it would have been within the level of one of ordinary skill in the art to remove the workpiece after homogenizing heating, and prior to hot working by forging, etc., because Masahashi does not specify said thermomechanical treatment is performed in the homogenizing furnace, and/or because said working temperature is lower than the homogenization temperature. Because the process of heat treating and thermomechanically working as taught by Masahashi broadly overlaps the presently claimed parameters, and applicant has not shown specific unexpected results/criticality of the presently claimed range with respect to said overlap, it is held that Masahashi has created a prima facie case of obviousness of the presently claimed invention.

Evidence of unexpected properties may be in the form of a direct or indirect comparison of the claimed invention with the closest prior art which is commensurate in scope with the claims. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) and MPEP §716.02(d) - §716.02(e).

Concerning claims 10, 12, 16-17, as stated above, Masahashi teaches said heat treatment parameters that overlap the presently claimed parameters.

Concerning claim 11, though the prior art does not teach the structure of the device used to perform the instant method step of holding at the holding temperature, it is well settled that

Art Unit: 1793

where the prior art clearly teaches the process sought to be patented, a difference in the structure of the apparatus used to carry out the process, or any of its steps, cannot be considered as a patentable limitation therein (In re Sweeney et al. 72 USPQ 50).

Response to Arguments

4. In the response filed on July 14, 2008, applicant amended claims 8, 10, 14, and 16, and submitted various arguments traversing the rejections of record. The examiner agrees that no new matter has been added.

5. The declaration under 37 CFR 1.132 filed April 11, 2008 is insufficient to overcome the rejection of claims 8, 10-12, 14, 16, 17 based upon Masahashi et al as set forth in the last Office action because: declarant tested “a test piece... subjected to the homogenization heating as defined in Masahashi et al” of undisclosed composition and undisclosed processing steps to particular high speed processing, and concluded when the method of Masahashi et al is modified to include the step of hot working as taught by the present invention, cracking occurs. This has not been found persuasive for reasons a)-c). Concerning reason a), it is unclear the composition tested. Concerning reason b), it is unclear the particular processing used to form said test piece, and how this is representative of Masahashi. Concerning reason c), “hot working as taught by the present invention” is not commensurate in scope with the hot working limitations in the instant claims.

6. As stated previously, the examiner agrees that instant claims 8-12 are supported in the certified translation of the priority document, and applicant has overcome the JP'025 reference.

Art Unit: 1793

7. Applicant's argument that the present invention is allowable over the prior art of record because a) Masahashi does not produce lamellar structure b) Masahashi operates homogenization treatment in gamma+beta phase c) Masahashi production speed is too slow has not clearly been found persuasive.

The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). See MPEP § 2145. Objective evidence which must be factually supported by an appropriate affidavit or declaration to be of probative value includes evidence of unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, and allegations that the author(s) of the prior art derived the disclosed subject matter from the applicant. See MPEP 716.01 c, g. See, for example, *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984).

8. Evidence that Masahashi does not produce lamellar structure, Masahashi operates homogenization treatment in gamma+beta phase, Masahashi production speed is too slow needs to be in declaration form (along with specific details/description why the alloy together with processing steps are representative of the closest prior art of Masahashi).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 7:30 am- 4:00 pm Mon-Wed.


Art Unit: 1793

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit
1793

/J. M./
Examiner, Art Unit 1793
September 16, 2008

| | | | |
|--|--------------------------------|--|--|
| Application Number  | Application/Control No. | Applicant(s)/Patent under Reexamination | |
| | 10/667,651 | TETSUI ET AL. | |
| | Examiner | Art Unit | |
| | Janelle Morillo | 1793 | |